Linear Algebra I - MATH 1107R - Summer 2021

School of Mathematics and Statistics, Carleton University
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Instructor: Dr. Kevin Cheung   **E-mail:** kevin.cheung@carleton.ca

Course description: Systems of linear equations; vector space of n-tuples, subspaces, bases; matrix transformations, kernel, range; matrix algebra and determinants. Dot product. Complex numbers (including de Moivre's Theorem, and n-th roots). Eigenvalues, diagonalization and applications. Note: MATH 1119 is not an acceptable substitute for MATH 1107.

Prerequisite: Ontario Grade 12 Mathematics: Advanced Functions, or MATH 0005 or equivalent, or permission of the School.

Textbook: The course is based on these notes.

Lectures: No synchronous lectures. Notes and supplementary videos available.

Tutorials: Fri 17:35 - 18:55   **Teaching Assistants (TAs):** TBA

Evaluation scheme: The final mark consists of 100 points distributed as follows:

Quizzes - 22 in total (maximum 10 points):
- At most 0.5 point can be earned on each quiz **up to a maximum** of 10 points. Points above this maximum are discarded. Quizzes are open until the last day of lecture.

Tests - 11 in total (maximum 50 points):
- At most 5 points can be earned on each test **up to a maximum** of 50 points. Points above this maximum are discarded. **Each test must be completed during the last 25 minutes of tutorial.** (Extra time accommodation for PMC students with a letter of accommodation.)

Problem sets - 6 in total (maximum 10 points):
- At most 2 points can be earned on each problem set **up to a maximum** of 10 points in total. Points above this maximum are discarded.

Midterm exam (maximum 10 points)
Final exam (maximum 20 points)
- The final exam will take place during the Summer 2021 final exam period in August. No travel plans should be made until the exam schedule is published.

Important dates:
Midterm exam: **Jul 2 during tutorial - 40 minutes in duration**
Tests: May 14, 21, 28, Jun 4, 11, 18, 9, 16, 23, 30, Aug 6
Problem set due dates: May 25, Jun 8, Jul 6, 20, Aug 3, 13

A completed academic integrity pledge is required to unlock tests and problem sets.

Posting quiz, test, or problem set questions outside Brightspace to sites such as chegg.com is strictly prohibited and is considered a violation of academic integrity.

System requirements: Students are fully responsible for resolving their own computer and internet connection issues and having the proper tools to create PDF files for problem set submissions. Students having login issues with should contact the **ITS service desk.**

Policies for problem sets:
- **Up to two** problem sets no more than 24 hours late each are accepted.
- Problem set questions are generated from a unique code assigned to each student upon completion of the honour pledge. Students **must** use this code to generate their set of questions. **Using an incorrect code will result in a grade of 0 for the problem set.**
- Submissions for problem sets must follow the submission requirements.

Communication: It is the students' responsibility to check for announcements in Brightspace and their Carleton email account every business day. Communication between students and the instructor is through electronic means only except for PMC students with a letter requesting accommodation for other available means of communication. All email to the instructor and TAs must be made from Carleton email accounts. **Messages originating from non-Carleton University email addresses are typically ignored.**

Regrade requests: Students may request to have any evaluated term work regraded if it has been incorrectly graded. Such a request must be submitted to the instructor in writing (briefly describing what has been incorrectly graded) no later than five (5) business days after the work is first returned. All regrades are final.

Students must conform to the University's Academic Integrity Policy. Failure to be informed of the expectations regarding academic integrity is not a valid excuse for violations of the policy. Minimum penalties for violations of the Carleton Policy on Academic Integrity are:

- First offence, first-year students (< 4.0 credits completed): No credit for assignment/activity in question, or a final grade reduction of one full letter grade (e.g., A- becomes B-, if reduction results in an F, so be it), whichever penalty is greater.
- First offence (everyone else): F in the course
- Second offence: One-year suspension from program
- Third offence: Expulsion from the University

Pregnancy/Religious Accommodation: Write to the instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity services website.

Students with disabilities requiring academic accommodations in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments, specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608, every term to ensure that I receive your Letter of Accommodation, no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you only require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website.